

HARMONIA

This Compact Disc, **Harmonia**, has been funded by the inaugural **Peter Platt Memorial Scholarship**. The Scholarship's advertisement rubric succinctly explains: "Emeritus Professor Sir Peter Platt had a long and distinguished career in the Department of Music at the University of Sydney, first as a young lecturer (recently graduated from Oxford) during the 1950s, and then as the second Professor of Music from 1975. His involvement as an inspirational teacher and mentor continued after his retirement in 1989 until his death in 2000." I wish to thank the Music Department at the University of Sydney – especially Prof. Anne Boyd and Prof. Winsome Evans – for bestowing this great honour upon me; I am also very grateful to all of my colleagues who collaborated with me in the realization of this project: several of the composers and performers concerned have been closely associated with the Music Department, as teachers or students, over many years.

The 'pattern which connects' throughout **Harmonia** is, of course, (among other things) that venerable but much maligned wind-instrument, the recorder. Interestingly, not one of the diverse compositions hereon musically acknowledges – let alone defers to – its substantial pre-Classical repertoire and polysemic symbolism! This (non)approach does not seem to be due necessarily to any premeditated avoidance of early-music mannerisms, structures or iconologies on the part of the musics' composers but, rather, stems from an unselfconscious attitude towards the recorder – that it is yet another viable sound-source (and an extremely versatile one at that) which can be called upon for the expression of new Australian music wherein its accreted cultural semiotics might be stripped away, totally ignored, or reformulated anew. Despite its advanced age, here is ineluctable proof that this 'simple' European-born music-maker remains vitally alive in this country, rubbing shoulders even with the most up-to-date electronic or computer-driven sound-devices. If further evidence of the recorder's *joie de vivre* here be needed, one only has to itemize its panoply of post-1950s playing techniques imaginatively and intelligently deployed within those Australian compositions comprising **Harmonia**: multiphonics; microtones; timbral variations (via alternative fingerings); various types of glissandi; overblown trills; fluttertonguing, tongue-tremoli, and exaggerated plosive articulations; (well-pitched) air-noises; percussive 'pops' obtained through vigorous finger-action; vocal/instrumental admixtures; 'prepared' instruments... Such a rich variegation of antipodean musicality surely presages a bright future, both for the recorder itself and for compositional creativity in general, on our seventh continent.

I do hope that you, the listener, will savour – and perhaps even be deeply moved by – the abundant musical feast that follows.

Dr Ian Shanahan, December 2004.

1. MICHAEL LONSDALE (B.1961): THIEVING MINUTES (1994), FOR SOPRANO RECORDER.

Ian Shanahan – soprano recorder.

~ For Paul N. & Christa, and for Ian Shanahan to play ~

(The Psychiatrist as fool.) Balance as Transcendata; / when capricious intoxication ridicules earnest efforts ... now, disaster lays in wait, to bury any thought-fault-line. Joyful abandon-data sights a 'two-step': the 'gaze of restriction', and the 'criteria of cancellation', standing stricken! Dying by step, only to mully-grubb. / Success in miniature is cheap, thieving minutes from the unsuspecting.

© Michael Lonsdale, 1995.

2. IAN SHANAHAN (B.1962): **LINES OF LIGHT: SEVEN IMPROVISATIONS ON ΑΙΘΕΡΟΣ ΜΕΛΟΣ** (1991/1993), FOR AMPLIFIED RECORDERS (1 PLAYER), TWO YAMAHA DX7 KEYBOARD SYNTHESIZERS (1 OR 2 PLAYERS), AND METALLIC PERCUSSION INSTRUMENTS (1 OR 2 PLAYERS).

Ian Shanahan – amplified recorders (prepared alto → soprano → tenor recorders) / Roger Dean – Yamaha DX7 keyboard synthesizers / Daryl Pratt – metallic percussion instruments.*

* *The alto recorder's endhole is closed airtight with a malleable gummy lozenge.*

My title “Lines of Light” is appropriated from a novel of the same name by Daniele Del Giudice, consisting almost entirely of a dialogue between a novelist and a theoretical physicist. I have been able, with this title, to genuinely imbue the work with meaning at a number of levels. Metaphorically, **Lines of Light** invokes the notion of solar spectra, as manifested by the phenomenon of the arcing rainbow which appears to comprise seven colours and various Fraunhofer absorption lines (dark spectral bands – suppressed frequencies – evincing the coolness of the Sun’s surface compared to its much hotter core). Hence, this piece embraces seven sections, all but the last being proportioned according to the relative wavelengths of Fraunhofer lines A to H. (The fact that there are only three primary colours is mirrored by the minimum number of players.) Moreover, I would hope that the sounds themselves which emanate from my unusual instrumental array provoke, within the listener’s mental landscape, various images of light.

Beyond this physical metaphor, I have extensively utilized more ancient and mystical associations with the word/ikon of light. The final section of **Lines of Light**, *αιθερος μελος* (*aitheros melos*: “Music of the Spheres”) – a transcription from an earlier version of this piece – exhibits a temporal organization and proportions which are determined by *gematria*, the Ancient Greek (and Jewish) Kabbalistic system of isopsephial equivalence between word and number that demonstrates various geometrical truths, and ascribes arithmetically a network of hidden connections to otherwise distinct words and archetypes. (In addition to certain Gnostic texts, the sacred hermetic writings of the Platonists and Pythagoreans – as well as the Holy Scriptures in the New Testament – are all supersaturated with the silent, mysterious truths of ‘number’.) On the other hand, the first six “improvisations” in **Lines of Light** – whose basis-materials nonetheless stem from the fully composed *αιθερος μελος* – were planned to fill out 485 seconds, proceeding from ‘chaos’ to ‘order’. (485 ≈ *IEOY*, the Greek mystics’ *Tetragrammaton*, equivalent to the *OM* of Eastern cosmogony. Also, not insignificantly ... 485 ≈ Ο Παναγιος: The All-Holy.)

Lines of Light: Seven Improvisations on αιθερος μελος, commissioned by the neoteric new-music ensemble *austrALYSIS* with funds from the Performing Arts Board of the Australia Council for the Arts, is dedicated to the memory of Barbara Burke – an Australian Christian worker murdered in Jerusalem during the early 1990s. Her name, together with various Biblical epigrams on ‘light’ (*φως: phos*), is cryptically encoded into the music. (I do trust that Mrs Burke would have approved of the esoteric Christian imagery!)

© Ian Shanahan, 1993.

3. ERIC GROSS (B.1926): “**IAN’S SHENANIGAN**” **NO.1 OP.142** (1985), FOR ALTO RECORDER.

Ian Shanahan – alto recorder.

This piece, composed in 1985, was written for and dedicated to Ian Shanahan who was then my student at the University of Sydney. I had been aware for some time that Ian was indeed a recorder-virtuoso, and so I wanted to write something that challenged even his technical and musical prowess. My compositional process for this piece involved much cooperation and consultation with the performer, and some of the technical devices used were suggested by Ian himself; these include the use of various multiphonics, trilled downward glissandi, airy ‘echo sounds’ produced by holding the recorder transversely (like a flute) and blowing across the window so as to elicit faintly the fingered first-register pitches, a spat lip ‘pizzicato’ or ‘sputato’ attack (with or without additional vocalization) causing the fingered first-register note to be overblown indeterminately, and some other effects.

The title of this work, “**Ian’s Shenanigan**”, and some of the thematic material employed, emphasizes Ian’s

Irish descent in a good-natured way. There is much movement, stepwise and by leap, as well as considerable use of dynamic contrast and exploitation of some of the colouristic possibilities able to be produced on the recorder by an expert performer. The music also features palindromic structures (truncated slightly for this recording); it builds up to an exciting climax by means of overblown trills and multiphonics to conclude the composition. This piece and its companion, “**Ian’s Shenanigan**” **No.2**, (composed in 1988 also for Dr Shanahan) was performed by him at the University of Bologna, Italy as part of that institution’s ninth-centenary celebrations during 1988.

© Dr Eric Gross, 2004.

4. IAN SHANAHAN (B.1962): LINGUA SILENS FLORUM (1991), A GARLAND FOR PREPARED ALTO RECORDER.

Ian Shanahan – prepared alto recorder.*

*** The alto recorder's endhole is closed airtight with a malleable gummy lozenge.**

“It is said that the Buddha once gave a sermon without saying a word; he merely held up a flower to his listeners. This was the famous ‘Flower Sermon’, a sermon in the language of patterns, the *silent language of flowers*. {György Doczi, **The Power of Limits**, p.1.}

This very brief and gentle work (in which the alto recorder is ‘prepared’ by blocking the instrument’s endhole airtight with Blutac) is dedicated to Dr Eric Gross, upon his retirement from the position of Associate Professor in the Department of Music at the University of Sydney. I premièred it at his Farewell Concert, as the first of a number of short ‘garlands’ in a musical Festschrift offered to the esteemed professor. Besides being just an exercise in breath- and articulatory-control, one hopes that the subtle floral patterning of the music in **Lingua Silens Florum** transcends mundanity, and captures something of the essence of the man.

© Ian Shanahan, 1991.

5. JANE STANLEY (B.1976): SPINDRIFT / INTERIORS (2003), FOR RECORDERS (1 PLAYER), MANDOLIN AND MANDOLA (1 PLAYER), AND PIANO.

Ian Shanahan – recorders (alto → tenor → soprano → bass recorders) / Michael Hooper – mandolin and mandola / Zubin Kanga – piano.

It is certainly possible to listen to Jane Stanley’s **Spindrift / Interiors** in the way that the title suggests: “spindrift” means spray swept from waves by a strong wind, an image that seems to be impressionistically played out in the piece’s shifting musical textures, plays of colour and ornament, and introspective “interior” mood. In fact, the composer’s choice of this title – from two words that appear in the poem **At My Grandmother’s** by David Malouf – actively encourages this kind of interpretation by the listener. Yet in terms of compositional process, these musical hints of sea-spray have actually been multiplied out from strict cycles of pitches and rhythms. Stanley identifies these latter, which she initially developed for a song that sets Malouf’s text, with the mediaeval techniques of isorhythm and *isomelos*, patterns of pitch and rhythm that repeat asynchronously. Her purpose in using such devices is two-fold: in the first instance she is interested in offering the listener a piece with a “pleasing” structure, and so concerns herself with the proportions of the work when planning its cycles. But secondly, in common with many recent composers, such structures create a restricted field of possibilities, a reservoir of material out of which the surface of the music can be instinctively crafted.

© Rachel Campbell, 2004.

6. ROBERT ALLWORTH (B.1943): A MEDITATION OF SAINT CLARE (1990), FOR TENOR RECORDER.

Ian Shanahan – tenor recorder.

The composer writes: “**A Meditation of Saint Clare** is an evocative piece written for [the Australian] recorder-player Ian Shanahan”. Its pitch-morphology seems serial – **A Meditation of Saint Clare** begins with a conventional 12-tone ‘row’ – but this is in fact an illusion: thereafter, only certain fragmentary motifs can be traced back intervallically to the opening panchromatic phrases. Regardless of its structure, this clear-cut miniature is indeed ‘meditative’ – a quiet homage to the 13th-century saint (founder of the “Poor Clares”; canonized in 1255) who was deeply influenced by St. Francis of Assisi in likewise renouncing worldly things for a life filled with prayerful contemplation.

© Ian Shanahan, 2004.

7. COLIN BRIGHT (B.1949): LET THE STORM BREAK LOOSE! (2003), FOR CD (AN ELECTROACOUSTIC COMPOSITION FEATURING RECORDERS).

Ian Shanahan – sopranino, soprano, alto, tenor, and bass recorders.

“It is the absolute right of the state to supervise the formation of public opinion.” ... “Nation, rise up; let the storm break loose!” {from Joseph Goebbels’ speech in the Sportpalast, 18 February 1943}.

“The size of the lie is a definite factor in causing it to be believed, for the vast masses of the nation are in the depths of their hearts more easily deceived than they are consciously and intentionally bad. The primitive simplicity of their minds renders them a more easy prey to a big lie than to a small one, for they themselves often tell little lies but would be ashamed to tell a big one.” {Adolf Hitler: **Mein Kampf** (1925–1926)}.

“Children ... Overboard” {John Howard, Philip Ruddock, Peter Reith: Australia, 2002}.

According to Eve O’Kelly (**The Recorder Today**, Cambridge UK, 1990, p.8), the recorder remained a favourite instrument in what became the Hitler Youth Movement.

The Music: As well as being a world-renowned chess problemist and a composer, Ian Shanahan is a ‘grandmaster’ of recorders. This piece draws upon the full range of normally-available recorders, from bass to sopranino. The recorder plays, at different times, the rôle of interjector and commentator – the outspoken voice of the protagonist, the fanciful swoop of a bird in a flight of freedom, and the mournful cry of the disenfranchised spirit. Quartertones are used frequently, creating fragmented speech-like utterances. They are also used chromatically to produce seamless fluid runs at very high velocity. Quartertones, too, give rise to a human-voice-like quality in the slower ‘wailing’ section. Multiphonics (colourful, frequently discordant, multiple-sonorities that derive at times from unusual fingering configurations) are interwoven throughout the music – and have a particular function when used against descending inverted minor triads. Some passages are beyond the possible, involving up to four different recorders over several octaves with no time at all to change instruments. This is intentional, and I regard this music as an electronic studio piece – not able to be realised ‘live’ without considerable simplification of the recorder part – which is intended to take a very old instrument into the computer age, where, I must say, I think it sits very comfortably. The recording [of the recorders] was made at the Colbright Studio during December 2003, on a PC with Logic Audio.

© Colin Bright, 2004.

8. IAN SHANAHAN (B.1962): HARMONIA {IN PP} (2001), FOR TENOR RECORDER AND PIANO.

Ian Shanahan – tenor recorder / Andrew Robbie – piano.

harmonia [Greek] ≈ ‘a fitting together’ ≈ *compositio[nis]* [Latin] ⇒ ‘a musical composition’ (i.e. a harmonious, well-structured assemblage of sounds/silences), and – of course – ‘harmony’ ⇒ homophony ⇒ chorale, recitative, ...; **pp** [Italian abbreviation for ‘very quiet’] ⇒ Peter Platt ⇒ the Perfect Professor. To ‘Prof’ ... a Persistence of *Πνευμα* (*Pneuma* [Greek]) ≈ ‘wind’ and ‘spirit’: “Funereal yet serene – a dignified mourning” (of surprising starkness, and textural simplicity?), for one who Plucks Psalteries in Pleromatic Paradise ... Lest We Forget.

Harmonia {in PP}, written in memory of Professor Peter Platt, employs none of my typically abstract, complex paracompositional schemata: rather, I approached this concise piece much more humbly – in a way that I imagine ‘Prof’ himself might have quietly begun to sketch out one of his own modest works.

© Ian Shanahan, 2001.

9. ROBERT ALLWORTH (B.1943): TWO BAGATELLES (1991), FOR MANDOLIN DUO AND SOPRANO RECORDER.

Ian Shanahan – soprano recorder / Paul Hooper and Adrian Hooper – mandolins.

Robert Allworth’s two attractive brevities (amazingly, they both fit onto a single score-page!) are homages to the Second Viennese School, being inspired by the musics of Arnold Schönberg and Anton Webern respectively: the first bagatelle, **Schoenberg–Allworth**, originates “from [the] op.19 piano pieces” whereas the second, **Webern–Allworth**, stems “from [Webern’s] **Five Pieces** for orchestra op.10” – and accordingly Allworth’s **Two Bagatelles** sit within a ‘pre-serial’ non-tonal pitch-language. Each of these miniatures makes salient textural use of ‘iterative articulations’ (*tremoli* in the case of the first mandolin; ‘flutertonguing’ or rapid ‘double-tonguing’ on the soprano recorder), which thereby serves a unific function – binding together the music’s surfaces. Deeper structural relationships and a uniformity of compositional approach between the two pieces can be discerned from commensurable slow tempi (their ratio is 4:5), from closely matching rhythmic organization, and from a quasi-dodecaphony which distinctly emphasizes identical intervals – in particular, the tritone. Interestingly, in **Schoenberg–Allworth** (“for Adrian & Paul Hooper”) the two mandolins never actually play simultaneously, instead bouncing off one another in glorious stereo antiphony. **Webern–Allworth**, the soprano recorder bagatelle (“for Ian Shanahan”), is likewise uncomplicatedly melodious – spotlighting the higher registers of the instrument.

© Ian Shanahan, 2004.

10. BRUCE CALE (B.1939): CULLENBENBONG (1989), FOR SOLO RECORDER PLAYER (BASS RECORDER AND 7 JAPANESE TEMPLE BELLS [RIN]).

Ian Shanahan – bass recorder and 7 Japanese temple bells (rin).

“Cullenbenbong” is the name of a valley below the composer’s home. Aborigines lived within the region for thousands of years ... but no more. Today, a domestic bird (a Peach-face) lives within birdsong-reach of the valley: his chatter and song probably reflect some of nature’s gifts which Cullenbenbong holds – reflections of his song.

Cullenbenbong, as a direct commission from Ian Shanahan, is the result of an interest in creative music stemming back to around the early 1960s, in jazz and contemporary music (if one might call it “classical” music). The piece concentrates on the atmosphere created by the use of Japanese temple bells (or *rin*) and a studied use of bass recorder multiphonics. The music is in three parts: 1. **Cullen**; 2. **Ben**; 3. **Bong**. The three

sections are controlled by a chromatic modal/tonal gravity in a measured form by twelve key-shifts over the metric measurement time-distance of 720 equal units. Recently, **Cullenbenbong** was awarded the much-esteemed Adolf Spivakovsky Memorial Prize (1989) for experimental composition by Australian composers.

Note: This recording of **Cullenbenbong** does *not* employ multitracking (whereby the bass recorder and *rin* would have been separately recorded thence superimposed during the mixdown): *all* instruments herein were played by Ian Shanahan and recorded stereophonically live, 'in real time'.

© Bruce Cale, 1989.

11. IAN SHANAHAN (B.1962): **CATHY'S SONG** (1988), AN ENCORE PIECE FOR SOPRANINO RECORDER.

Ian Shanahan – sopranino recorder.

This vignette is totally atypical of my compositional output! At the time it was written (over a period of about four hours during the early morning of 3 April 1988 [Easter Sunday], whilst I was rather inebriated and thoroughly miserable), I recall feeling an illogical but ineluctable concern – alcohol-induced paranoia? – that I had lost the ability to write truly tuneful music ... something I have always been readily able to do, but by choice do not normally indulge in. (I also wanted to prove a point [to certain musical reactionaries]: that *at least some composers who write music which is not overtly 'melodic' do so not just because they are incapable of composing 'a decent tune'.*) Anyway, the outcome of this unhappy state was a very brisk, joyful, and bubbly little melodic piece, about one minute long, which contains quite a few quirky rhythmic and modal twists (in the manner of Ross Edwards' fashionable *maninya* style, only much more so?). I do trust that **Cathy's Song**'s idiosyncratic attributes lift it beyond mere conservatism, which is something that I would hate to be accused of! I myself normally play **Cathy's Song** from memory, as a fun encore piece, but this isn't obligatory. At one level, this title makes reference to a vaguely similar tune by that wonderful Australian jazz composer and vibraphonist John Sangster, **Kaffir Song** – but there are private, more personal, connotations...

© Ian Shanahan, 1989.

12. ROBERT ALLWORTH (B.1943): **HOW MANY SUNSETS WILL I SEE?** (1987), FOR ALTO RECORDER AND MANDOLIN.

Ian Shanahan – alto recorder / Paul Hooper – mandolin.

Composed in December 1987, **How Many Sunsets Will I See?** is a nostalgic reverie dedicated to the memory of my mother and father that highlights the dynamic capabilities of both instruments; its score has been published by Orpheus Music (Armidale, N.S.W., Australia). The cooperation of 2MBS-FM in recording this work and making it available is gratefully acknowledged.

© Robert Allworth, 1990.

13. IAN SHANAHAN (B.1962): **ZODIAC: CRYSTAL ORBIT IMPROVISATIONS** (1996), A MANDALIKON FOR AMPLIFIED SOPRANO RECORDER, MIDI WIND INSTRUMENT, KEYBOARD SYNTHESIZER, AND OPTIONAL REAL-TIME COMPUTER CONTROL.

Ian Shanahan – amplified soprano recorder / Sandy Evans – Yamaha WX11 MIDI wind instrument, controlling a Yamaha DX7 Series I keyboard synthesizer / Roger Dean – Yamaha DX7 Series II keyboard synthesizer, and MAX software.

Given my ongoing philosophical reflections on the Cosmos – and the fact that the recorder-player has twelve

'modules' of material to cycle through herein – is it not surprising that I have named this piece (or, perhaps more accurately, this 'comprovisation': a compositional framework for improvisation) **Zodiac**?

When one ponders the mechanics of nature at various levels, it soon becomes apparent that much unfolds *epicyclically* – as 'wheels-within-wheels' – and that the universe is essentially devoid of linearity (whilst exhibiting, nonetheless, some degree of architectonic self-similarity). Moreover, the magnitude of 'stellar time' when compared with the infinitesimal brevity of a human life-span, absolutely staggers me: consider that between one's first observation of the night-sky and one's final glimpse of it just before death, the star-configurations (and astronomical cycles) do appear to remain invariant. Therefore, I desired to create a work which would provoke diverse music-making and spontaneous invention within an utterly non-teleological 'crystalline' colotomic structure, without any clear-cut climaxes or obvious points of repose: **Zodiac: Crystal Orbit Improvisations** simply starts and, some time later, stops! So, each player (improvising within certain specified parameters) 'orbits' through their respective musical source-materials, which are themselves internally organized and permuted algebraically according to the mathematics of Cyclic Groups – i.e. orbits within orbits... The MIDI wind instrumentalist and the synthesizer player also cue each other to pause and resume locally; the recorder-player signals only the end of the performance. A stream of autonomous computer data, or instead pitch-data from both wind instruments, triggers real-time interactive software (such as a MAX patch) to randomly change the synthesizers' voices: I envisage the overall timbral effect to be rather like sunlight being dispersed through a rotating multifaceted crystal and refracted unpredictably – dazzling, flickering, brilliantly coruscative!

Such circumfluent epicyclicity, all-pervasive here (from the music's microscopic sound-atoms through to its macro-organization), I believe invites one to *contemplate* upon its relentless acoustical 'ever-nowness', moment-by-moment – hence my categorial neologism for **Zodiac**: a "mandalikon". And **Zodiac**'s subtitular 'crystal orbits' allude both to this work's frozen permutative algebra and to celestial mechanics in general – including the fanciful poetic cosmology of the pre-Socratic philosopher Anaximenes of Miletus (fl. ca.545 BC), who imagined the stars to be ornaments attached to a crystal sphere that revolved around the Earth.

Zodiac: Crystal Orbit Improvisations, commissioned by Roger Dean and *australYSIS*, is joyfully dedicated to my friend and colleague Kala Perkins, an astronomer-artist-cosmologist ... a lover of stars who is researching the interface between astronomy, religion, and music: three aspects of the same thing (a *quadrivium*), in my book.

© Ian Shanahan, 1996.

14. MICHAEL LONSDALE (B.1961): 'ALL GONE THUS...' [AN ENCORE FOR IAN] (1995), FOR PREPARED ALTO RECORDER.

*Ian Shanahan – prepared alto recorder.**

* *The alto recorder's endhole is closed airtight with a malleable gummy lozenge.*

~ To Paul David Newman ~

Clouds gathering, water to mist — draped across 'a hidden Treasure'. / Shuffling through dross, finding 'the message' — (bitten by breezes), still mist — clasping all gone thus...

© Michael Lonsdale, 1995.

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Note: Within the track listings below, each track designated by an asterisk (*) was recorded entirely in a single 'take', and so is completely unedited; such recordings therefore document live performances under sound-studio conditions.

TRACKS 1*, 3, 10*, 12*, & 14* – Recorded 23/11/2004 (1*, 3, & 14*), 15/11/1989 (10*), and 8/12/1987 (12*) at 2MBS-FM Studio C, St. Leonards, Sydney. Producers – Ian Shanahan (1*, 3, & 14*), Bruce Cale (10*), and Robert Allworth (12*); Sound Engineers & Digital Editing (3) – Kerry Joyner (1*, 3, & 14*), Austin Harrison (10*), and Charles Barton (12*). Tracks 10* and 12* were previously released on JADE Records JADCD-1065 {"Best of Australian Classics"} (10*), and JADCD-1012 {"Music from Saint Michael's, Vaucluse, Sydney & Saint Andrew's Cathedral, Sydney"} (12*).

TRACKS 2, 8, & 13* – Recorded 25/9/1994 (2), 21/10/2001 (8), and 27/7/1996 (13*) at the Main Studio, Music Area, School of Contemporary Arts, the University of Western Sydney, Kingswood, Sydney. Producers & Computer Interactivity [MAX patch] (13*) – Ian Shanahan (2 & 8) and Roger Dean (13*); Sound Engineers & Digital Editing (2 & 8) – Adrian Luca (2 & 13*) and Emma Stacker (8). Previously released on JADE Records JADCD-1091 {"Lines of Light"} (2), and JADCD-1092 {"Auburn Splendour"} (8 & 13*).

TRACKS 4*, 6*, 9*, & 11* – Recorded 27/11/1991 (4*), 31/1/1994 (6*), 23/11/1991 (9*), and 21/6/1990 (11*) at EMI Studios 301, Sydney. Producer – Robert Allworth; Sound Engineer – Martin Benge. Previously released on JADE Records JADCD-1088 {"Echoes/Fantasies"} (4* & 11*), JADCD-1045 {"Barely Spring"} (6*), and JADCD-1038 {"Concerto"} (9*).

TRACK 5 – Recorded 30/9/2004 at the Recital Hall East, Sydney Conservatorium of Music, Sydney. Producers – Michael Hooper, Ian Shanahan & Zubin Kanga; Sound Engineer & Digital Editing – Donna Hewitt.

TRACK 7 – Recorders recorded December 2003 and composition realized June–December 2003 at the Colbright Studio, Dee Why, Sydney. Producer, Sound Engineer & Digital Editing – Colin Bright.

The compilation **Harmonia** was mastered by Stephen Smart at Studios 301, Sydney, 1/12/2004.

Harmonia's Programme Notes were compiled and edited by Dr Ian Shanahan.

The CD Artwork for **Harmonia** was created by Maria Smetanin – Phone & Fax (02) 9634 1612; e-mail: <metag@triode.net.au>. Images include: the Julia 'dragon' (a self-similar fractal set); a Moeck Rottenburgh alto recorder; the Pleiades (M45 star cluster in the zodiacal constellation Taurus); some tempo-glissando equations developed by Ian Shanahan.

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